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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Reply To
Attn Of: MGREPOGR
OEA-095

August 12, 2002

MEMORANDUM

SUBJECT: Review of the Transformer PCB Investigation at Boeing Plant 2 Work Plan and Quality Assurance Project Plan

FROM: Ginna Grepo-Grove, Chemist, QA Office, OEA

TO: Anna Filotowski, RCRA PM
Office of Waste and Chemical Management

Please call if you would like to discuss these comments further:

Boeing Plant 2 Transformer PCB Investigation Work Plan

General Comments:

The Work Plan is disorganized and the information is fairly incomplete. There had been a number of references to previous investigations conducted at Boeing Plant2, however, since this investigation is a result of the documented PCB release sometime in November, 2001, then it should be realized that new sets of data need to be generated to meet the objectives set forth by the EPA directive.

The body of the work plan will need some reorganization. More information has to be provided to the reader and/or data user to fully understand the why samples have to be collected for this investigation. In the Introduction, the Background/Statement of the Problem should have been discussed first followed by the Purpose/Objectives of the Project then the Organization and Project Management. The main body of the plan should discuss what, where, when and how the tasks need to be done to meet the objectives of the project, following by the discussion, verification, interpretation and management of the expected results including the systematic resolution of unforeseen problems associated with the performance of the project tasks.

Specific Comments:

Page 1-1, section 1.1, Statement of the Purpose: Move this section after the Background/Statement of the Problem section. Give a clearer scenario of why the work plan and this investigation has to be done. Be specific. The hazardous constituent released was PCB. The release was documented in November, 2001. State the exact location of the PCB releases and the scope, boundary and limitations of this investigation. There were PCB sampling done in connection with the RCRA Facility Investigation (RFI) Work (1996, 1998, 2000) and the Corrective Measure Study (CMS 2000). However, since after November, 2001, state if was there any follow-up PCB sampling done to determine the concentrations, movement and extent of PCB releases and the possible human and ecological receptors from the time of the documented release to the present. In response to EPA's directive, state clearly the goals and objectives of this work plan for the investigation.

Page 1-1, section 1.2, Work Plan Organization: This is not necessary. The Table of Contents is sufficient.

Page 1-2, section 1.3, Checklist of EPA Work Plan Requirements: This section can be replaced by Tasks/Activity Schedule. List the tasks and the tentative dates that the tasks, activities will be performed and the tentative dates of completion.

Page 2-1, section 2, Background: Move this section to section 1.1 after Introduction. Change the name of the section to: Background/Statement of the Problem. State the exact location of the PCB release. State the approximate size of Seattle City Light's transformer installation located in Boeing Plant 2. State how many samples were collected and analyzed to document PCB release. State the Standard Operating Procedures Boeing followed in sample collection and analysis. State if the samples (wipes and/or grabs) collected were analyzed using screening techniques or fixed laboratory confirmatory analyses. Discuss the extent of sample collection done in November, 2001 and if possible, attach a map of the Transformer area sampled and indicate the concentrations detected or not detected per sampling location. EPA was informed of the PCB releases, state if Seattle City Light was also informed by Boeing. State if there was a continuous PCB leak/release from the time it was documented or it was only episodic. Note: The last paragraph in this section is not applicable to this investigation. The EPA directive is in connection with the PCB release documented sometime after November, 2001. Therefore, all other previous sampling results generated before the aforementioned date cannot be used to meet the objectives of the EPA directive.

Page 3-1 section 3.1 Project Organization and Responsibilities: three entities will be involved in this project, i.e., 1) EPA 2) Boeing Co, 3) Weston Solutions and 4) the laboratory- ARI. For each organization involved in the project, specify the contact person, provide the phone number and/or e-mail address, and discuss each person's role and responsibilities. Provide a chart that will

indicate the hierarchy of management and the lines of communication.

Page 4-1, section 4, Investigation to be Conducted: There are five main tasks that EPA directed Boeing to conduct in connection with this PCB investigation. For each of the main tasks, specify and discuss the activities/sub-tasks that will be conducted by Boeing to meet each project's goals. Set tentative schedule indicating the estimated date when the activity/ies will start and the estimated date of completion. Specify the deliverables that are expected to be generated from the activities. Discuss the hydrogeology of the site.

Previous PCB fate and transport model from the Duwamish area may be helpful for this project, however, because this effort will be a new investigation, no historical data generated before November, 2001 can be used to meet the goals of the project.

Provide detailed maps showing where the PCB release occurred, the sample locations most recently sampled for PCBs after the release and the results of the analyses. The maps will greatly help in determining the extent of the plume and the rate of migration of the PCBs.

Page 4-2, section 4.3, Data to be Collected: For each of the main tasks of the investigation, specify the data that will be needed and collected. Sampling Strategy: Verify the number of samples that will be collected and state in the work plan: the following number of samples will be collected : 36 upland soil borings, 5 bank samples, 5 sediment samples and 1 groundwater sample, which accounts to a total of 47 samples (these numbers were based on Figure 3 of the plan). For each boring, a sample will be collected every 2.5 ft. intervals to a total depth of 15 ft or until the water table is reached. All of the samples collected at 2.5 ft intervals will be analyzed for PCBs, even if the upper portion of the boring produced non detected PCB results.

The last paragraph of this section stated that 3 groundwater samples will be collected for PCBs and dissolved organic carbon. Only one groundwater sample is indicated to be collected in Figure 3. Specify who will be responsible for sample collection and discuss how will the samples be collected.

Because the a copy of the RFI will not be available all the time for reference, discuss in the plan the decontamination procedure that will be followed during and after each sample collection.

Analytical Methods: Briefly discuss the laboratory that will be used, the analytical method , the quantitation limits that will be required and the basis for the quantitation limit requirement (MTCA industrial?)

Page 5-1, section 5, Data Management: Specify the deliverables that are expected to be generated in this investigation. Discuss how the generated data will be verified, validated, used and archived.

Page 6-1, section 6, Quality Assurance Project Plan; Comments will be provided separately.

Page 7-1 , section 7, Schedule: Should be incorporated with section 4.

Quality Assurance Project Plan for the Transformer PCB Investigation - Boeing Plant 2, Seattle/Tukwila WA

General Comments:

There is no Approval Page for this QA Project Plan This page should be added with the authorized signatories responsible for the review and approval of the QAPP.

The QA Plan should be independent of all the other document concerning the project and should be able to provide all the necessary information regarding the project on its own. Each QA element should be discussed as required by the EPA QA R5 document.

Specific Comments:

Page 1-1, Section 1, Introduction: Provide a brief discussion of the site, and answer the usual questions what, where and why samples will need to be collected. The QA document used as a basis for the preparation of the QAPP and the organization who prepared the QAPP should also be stated in this section. Remove the last sentence currently written in this section.

Page 2-1, section 2.1, Distribution List: section 3.1 of the work plan list the project organization and responsibilities. A distribution list is a list of organizations involved in the project with their respective contact person, phone number, e-mail address who will be interested in receiving deliverables (approved QA Plans and completion report) for this project.

Page 2-1, section 2.2. Project/Task Organization: After the revision of section 3.1 of the work plan, cut and paste it to this section.

Page 2-1, section 2.2.3, Site Location and Identification: Provide a more detailed description of the location of the site. Provide the estimated area that will be covered by this investigation and sampling event.

Page 2-3, Section 2.3, Project Task Description and Schedule: After the revision of the work plan, cut and paste the same section to this one.

Page 2-2, Section 2.4, Quality Objectives and Criteria for Measurement Data: The RFI QAPP referenced is already more than 5 years old, refer the reader to the most recent approved RFI . Also, in a tabular form, provide a brief summary of DQO requirements for this project specifying the estimated number of samples, sample matrix, analytical method, quantitation limits, accuracy, precision and completeness requirements of the project.

Page 3-1, section 3.1, Sampling Process Design: At 2.5 ft interval up to 15 ft., a maximum of 6

samples per boring will be collected for this project. From Figure 3 of the work plan, for the vertical and horizontal characterization of the site, the following boring samples will be collected: 36 from upland soil, 5 from the bank, and 5 sediment samples. At a maximum of 6 sub-samples per boring, the total number of soil samples will be about 276 plus the three ground water samples that will be analyzed for PCBs and dissolved organic carbon (DOC). Include Figure 3 of the work plan to the QAPP. List the sample locations that will be sampled for this investigation. Provide a discussion on how the samples will be collected and the decontamination procedures that will be followed during and after each sample collection.

Page 3-1, section 3.2.3, Investigation Derived Wastes: State the frequency of sample analysis of investigation derived wastes (1 sample per matrix?)

Page 4-2, section 4.5, Validation and Verification Methods: The samples for this investigation will be analyzed for PCB as Aroclors only. Therefore, only the EPA CLP National Functional Guidelines for Organic Data Review and the technical specifications of the SW 846 Method 8082 will be used as basis for data validation.